THE OFFICE OF CLEAN ENERGY DEMONSTRATIONS

OCED
Office of Clean Energy Demonstrations

Overview

The U.S. Department of Energy (DOE) established the Office of Clean Energy Demonstrations (OCED) to help scale the emerging technologies needed to tackle our most pressing climate challenges and achieve net-zero emissions by 2050.

OCED received more than $25 billion in funding from the Bipartisan Infrastructure Law and Inflation Reduction Act to deliver clean energy demonstration projects at scale in partnership with the private sector to accelerate deployment, market adoption, and the equitable transition to a decarbonized system.

Project Oversight

To ensure the success of its projects, OCED is focused on demonstration project management oversight excellence. OCED will apply lessons learned from past DOE demonstrations and the private sector to enhance how it oversees projects. OCED will also support other offices to ensure a consistent approach to implementing these projects across DOE.

OCED also seeks to ensure excellence as it advances energy and environmental justice in large-scale demonstration projects to support an equitable clean energy transition. OCED will ensure the workforce and local communities are a key part of the solution to build an equitable clean energy future.

Project Portfolio

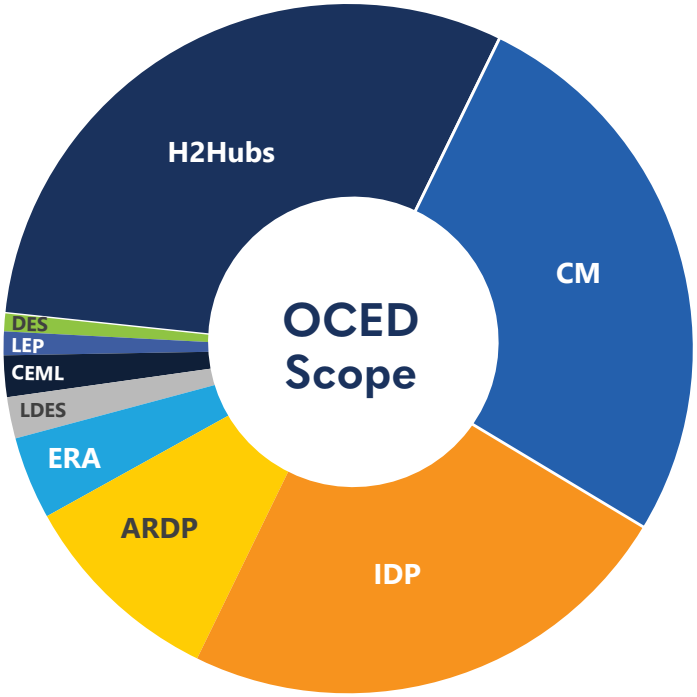
- Regional Clean Hydrogen Hubs (H2Hubs) $8 billion
- Carbon Management (CM) Regional Direct Air Capture Hubs, Carbon-Capture Demos & Large-Scale Pilot Projects $7 billion
- Industrial Demonstrations (IDP) $6.3 billion
- Advanced Reactor Demonstration Projects (ARDP) $2.5 billion
- Energy Improvements in Rural or Remote Areas (ERA) $1 billion
- Long-Duration Energy Storage Demonstrations (LDES) $505 million
- Clean Energy Demonstrations on Mine Land (CEML) $500 million
- Liftoff Enabling Programs (LEP) $133 million
- Distributed Energy Systems Demonstrations (DES) $50 million

What Does OCED Do?

OCED is a multi-technology office with demonstrations that include clean hydrogen, carbon management, industrial decarbonization, distributed energy systems, advanced nuclear reactors, long-duration energy storage, demonstration projects in rural or remote areas and on current and former mine land, and more.

The technologies in OCED's portfolio face significant barriers to scale. OCED's role is to address these barriers and help de-risk them. Central to OCED's approach is consistent engagement with a wide range of stakeholders and pursuit of projects that advance an equitable transition by providing benefits to communities across America.

Most of OCED's projects are structured as collaborative partnerships that use cost share agreements. OCED will provide up to 50 percent of the funding in its public-private partnerships, assisting its industry partners with the early steps to commercialization and deployment.



Long-Duration Energy Storage Demonstrations

Funding Amount: $505 million

Program Info

Overview: Long-Duration Energy Storage (LDES) Demonstrations will validate new energy storage technologies and enhance the capabilities of customers and communities to integrate grid storage more effectively. DOE defines LDES as storage systems capable of delivering electricity for 10 or more hours in duration.

Today's energy storage technologies are not sufficiently scaled or affordable to support the broad use of renewable energy on the electrical grid. Cheaper long-duration energy storage can increase grid reliability and resilience so that clean, reliable, affordable electricity is available whenever and wherever to everyone.

This program will help advance LDES systems toward widespread commercial deployment by providing an opportunity for nascent LDES technologies to overcome the technical and institutional barriers that exist for full-scale deployment with a focus on a range of different technology types for a diverse set of regions. This investment is aligned with DOE's Energy Storage Grand Challenge and will be critical to achieving the Department-wide Long-Duration Storage Shot goal of reducing the cost of grid-scale energy storage by 90% within the decade.

Together with the Inflation Reduction Act, which provided expanded clean energy tax credits for energy storage installation, this new investment will provide businesses the confidence they need to build and deploy innovative clean energy technologies critical to reaching our nation's climate goals.

Contact Info

Email: OCED@hq.doe.gov

Website: energy.gov/oced/LDES

More Resources

DOE's Office of Electricity Energy Storage Program: energy.gov/oe/energy-storage

DOE's Energy Storage Grand Challenge: energy.gov/energy-storage-grand-challenge/energy-storage-grand-challenge

DOE Office of Energy Efficiency & Renewable Energy's Long-Duration Storage Shot: energy.gov/eere/long-duration-storage-shot